

Inventor: Lovell-Badge, *et al.*

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Amendment and Response to Office Action

Page 2

The following Listing of the Claims will replace all prior versions and all prior listing of the claims in the present application:

Listing of the Claims:

1. (Currently Amended) A method for isolating a pluripotent cell which is at least partially committed to a given developmental pathway comprising the steps of:

(a) selecting a population of pluripotent cells;

(b) detecting expression of a *Sox* gene selected from the group consisting of *Sox15*, *Sox16* and any one of the *Sox* genes ~~provided in Table 1~~ selected from the group consisting of: *Sox21* (GenBank Accession No. AF107044); *Sox14* (GenBank Accession No. 107043); *Sox13* (GenBank Accession No. AB104474); *Sox10* (GenBank Accession No. AJ001183); *Sox22* (GenBank Accession No. U35612); *Sox18* (GenBank Accession No. L35032); *Sox11* (GenBank Accession No. U23752); *Sox1* (GenBank Accession No. Y13436); *Sox2* (GenBank Accession No. Z31560 and U12532); *Sox3* (GenBank Accession No. X94I25); *Sox4* (GenBank Accession No. X70683); *Sox5* (GenBank Accession No. S83306); *Sox6* (GenBank Accession No. U32614); *Sox7* (GenBank Accession No. AI15903/P40646); *Sox9* (GenBank Accession No. S74504/5/6); *Sox12* (GenBank Accession No. U70442); *Sox13* (GenBank Accession No. AB006329); *Sox15* (GenBank Accession No. AB104474); *Sox16* (GenBank Accession No. L29084); *Sox17* (GenBank Accession No. D49473); *Sox19* (GenBank Accession No. X98368); *Sox22* (GenBank Accession No. U35612);

(c) sorting the cells according to *Sox* gene expression; and

(d) isolating those cells which express a *Sox* gene.

2. (Previously Amended) The method of claim 1, wherein said population of cells is derived from CNS tissue.

3. (Previously Amended) The method of claim 1, wherein said population of cells is derived from a cell culture.

Inventor: Lovell-Badge, *et al.*

Filed: June 21, 2001

Amendment and Response to Office Action

Page 3

4. (Previously Amended) The method of claim 1, wherein said *Sox* gene expression is detected by nucleic acid hybridization.

5. (Previously Amended) The method of claim 1, wherein said *Sox* gene expression is detected by binding of a SOX polypeptide or a SOX nucleic acid corresponding to mRNA to a detectable ligand.

6. (Previously Amended) The method of claim 5, wherein the detectable ligand is a labeled immunoglobulin.

7. (Previously Amended) The method of claim 5, wherein said detectable ligand is a labeled oligonucleotide complementary to *Sox* mRNA.

8. (Currently Amended) The method of claim 1, wherein said *Sox* gene expression is detected by FACS analysis staining for β -galactosidase activity.

9. (Withdrawn) A method for isolating a desired cell type from a population of cells, comprising the steps of: (a) transfecting the population of cells with a genetic construct comprising a coding sequence encoding a detectable marker operatively linked to control regions sensitive to modulation by a SOX polypeptide; (b) detecting the cells which express the selectable marker; and (c) sorting the cells which express the selectable marker from the population of cells.

10. (Withdrawn) A method for isolating a neuroblastic cell from a population of cells, comprising the steps of: (a) transfecting the population of cells with a genetic construct comprising a coding sequence encoding a detectable marker operatively linked to a control sequence which is transactivatable by a SOX polypeptide; (b) detecting the cells which express the selectable marker; and (c) sorting the cells which express the selectable marker from the population of cells.

11. (Withdrawn) A method according to claim 9 or claim 10, wherein the selectable marker is a fluorescent or luminescent polypeptide.

Inventor: Lovell-Badge, *et al.*

Filed: June 21, 2001

Amendment and Response to Office Action

Page 4

12. (Withdrawn) A method according to claim 9 or claim 10, wherein the selectable marker is a polypeptide detectable at the surface of the cell.

13. (Withdrawn) A method for producing a cell committed to a specified lineage, comprising the steps of: (a) transfecting a pluripotent stem cell with a genetic construct comprising a coding sequence expressing a SOX polypeptide; (b) culturing the stem cells in order to differentiate them into neural cells; and (c) isolating the neural cells thereby produced.

14. (Withdrawn) A method according to claim 15, wherein the Sox sequence is operatively linked to an inducible promoter.

15. (Withdrawn) A method according to claim 13 or claim 14, wherein the cell is further transfected with a vector comprising a sequence encoding a regulator which modulates the expression of the Sox sequence.

16. (Previously Amended) The method of claim 1, wherein said *Sox* gene is a member of *Sox* Group A.

17. (Previously Amended) The method of claim 16, wherein said *Sox* gene is *Sox1* or *Sox2*.